

## Abstract

Ceramics comprising (i) at least one of  $\text{Nb}_2\text{O}_5$  or  $\text{Ta}_2\text{O}_5$  and (ii) at least two of (a)  $\text{Al}_2\text{O}_3$ , (b) REO, or (c) at least one of  $\text{ZrO}_2$  or  $\text{HfO}_2$ . Embodiments of ceramics according to the present invention can be made, formed as, or converted into optical waveguides,  
5 glass beads, articles (e.g., plates), fibers, particles (e.g., abrasive particles), and thin coatings.